Total Extirpation Versus Leaving a Stump in Operation for Uterine Fibro-Myomata.

BY

FLORIAN KRUG, M.D.,

New York.

REPRINTED FROM
THE NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS,
JANUARY, 1892.

TOTAL EXTIRPATION VERSUS LEAVING A STUMP IN OPERATION FOR UTERINE FIBRO-MYOMATA.

By Florian Krug, M. D.[1]

The removal of fibro-myomatous growths of the uterus is essentially an outcome of modern surgical achievements. Its recognition as a rational and justifiable procedure is due to the marvelous strides that have been made by abdominal surgeons during the last fifteen years.

Previous to the year 1873, abdominal section for fibrous tumors was done only sporadically and mostly as the result of an erroneous diagnosis. The tumor had been supposed to be of ovarian origin, until, after the abdomen had been opened, the mistake was found out. In most instances the operators would immediately give up any further attempt at removing the neoplasm and close up the incision; some others would persevere in their efforts to extirpate them. The majority of these operations proved fatal in the pre-antiseptic era. No wonder that a dreadful awe hung over all attempts at surgical relief from those tumors, which pathology teaches us to consider benign, and that very few were daring enough to invade a field, which was almost considered as a sacro-sanctum.

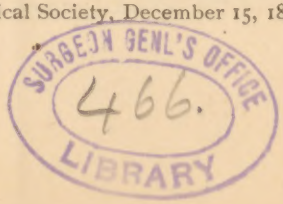
The earliest intentional operations were done for pediculated subserous fibromata (Atlee, Granville, Lane). But the credit of having placed abdominal section for uterine fibroids on a scientific basis undoubtedly belongs to J. Péan of Paris. He was the first to operate on a comparatively large series of previously diagnosticated cases according to strict indications. His, at that time astonishing, results were instrumental more than anything else to establish hysterotomy as a recognized surgical procedure.

Soon after his publication, "De l'Ablation Partielle ou Totale de l'Uterus par la Gastrotomie," appeared in Paris in 1873, others gained new courage and commenced to follow up the line that Péan laid out as a pioneer.

To Hegar and Kaltenbach is due a great deal of credit for being foremost in promulgating the new teaching, and their names are inseparable from the history of the extra-peritoneal treatment of the stump.

---

[1] Read before The New York Obstetrical Society, December 15, 1891.



Almost as old as the operation itself is the controversy amongst abdominal surgeons over the advantages of the extra- as compared with the intra-peritoneal method of treating the stump. As the principal advocate of the intra-peritoneal method, Prof. Schroeder of Berlin must be named.

However, I do not intend to impose upon your indulgence by bringing up all the arguments *pro* and *con* which have been made on either side.

But in choosing this mooted point, viz.: total extirpation for fibroids without leaving a stump, as the subject of my paper to-night, I feel as if I should be exempt from an apology for doing so, as most American text-books on diseases of women do not even mention any other method but the extra-and intra-peritoneal one.

Now, I am confident that total extirpation without leaving a stump in fibroids is entitled not only to a thorough trial and investigation, but is bound to eventually be recognized as *the ideal* method.

The priority of applying Freund's method of extirpating the cancerous uterus to fibromatous changes of the same belongs to Prof. Bardenheuer. After him, Martin of Berlin has advocated the same *modus operandi.* Recently Chrobak has adopted the same course and has published seventeen cases operated according to that principle, without a death. On this side of the Atlantic the adherents to this method are few in number, Dr. Eastman of Indianapolis and Dr. Ross of Toronto being the only ones to my knowledge who have adopted this procedure avowedly.

My first operation of this kind was done on the 13th of May, 1890. History and specimen were presented to this Society. Since then I have operated according to this method six times in all; most of the cases were reported here also.

Before describing the technique of my method of extirpating the uterus supra-pubically, I wish to state, that while not claiming any priority for any of the different steps employed in doing so, the *tout ensemble* of the method is essentially my own.

In deciding upon the most desirable way of proceeding, I was guided by my experience gained from the smooth course of a large number of vaginal hysterectomies. Therefore, I tried to adapt the method of operating, as well as that of dressing and after-treatment, as much as possible to the former procedure. I reasoned that the other conditions being essentially the same, the abdominal incision would add but little to the total amount of surgical risk.

In the first place, it seemed of paramount importance to keep the stumps of the broad ligaments away from contact with the intes-

tines, thus preventing adhesions and possible intestinal obstruction. Furthermore, I believed perfect drainage a most essential attribute to smooth recovery.

Considering the vagina the natural channel for normal, viz., menstrual and lochial, discharges, I also held it to be the best outlet for pathological discharges following the extirpation of the organ, provided that infection from outside could effectively be guarded against.

The iodoform gauze dressing is a secure means of preventing infection from without. Should infection occur, it is due to the fact that pathogenic germs have been left in a vagina not properly sterilized, and not to penetration of germs through the gauze packing.

As on many previous occasions, I must here call your attention to the fact, that too many operators rely on douching the vagina with different germicides in order to disinfect it. Careful bacteriological researches have shown that the vagina and cervical canal are quite frequently the domicile of the strepto- and staphylococcus. Now, if we consider for a moment the macroscopical structure of the vagina and cervical canal, we must readily concede, that even the most thorough irrigation will not render them aseptic.

No one will nowadays make an abdominal incision and simply rely on antiseptic irrigation without first thoroughly scrubbing the abdominal walls with soap and warm water, etc. Still, so many will open the peritoneal cavity from below, without a mechanical cleansing of the parts prior to using a germicide solution. And if they meet with disastrous results, they are prone to charge it to infection from without, instead of to deficiency in rendering the field of operation perfectly sterile.

In my last series of vaginal hysterectomies, all followed by the most happy results, the vaginal dressing was allowed to remain from six to nine days after the operation, when, on changing, it was always found perfectly sweet. This is the best proof that the much-dreaded danger of infection from without, even in the presence of the natural discharges from bladder and rectum, is a visionary one.

Instead of using soap and water, I prefer mollin containing 10 per cent. of creolin, and I scrub the vaginal folds by means of a brush on a handle. A speculum is then inserted, and the cervix having been freed of all adherent mucus, is plugged with a small strip of iodoform gauze. A thorough irrigation of bichloride solution is then given and the patient placed in Trendelenburg's posture.

I shall not lose many words to-night in pointing out the advantages of Trendelenburg's posture. Even the worst skeptics aregrad

ually awakening to the fact that it is one of the most valuable additions to our modern surgical means. But if any one should be most obstinate to become a convert to this method, I would like to extirpate a uterus before him, in order to convince him.

At the meeting of the Obstetrical Section of the American Association held in Washington, in the spring of this year, Dr. Joseph Eastman of Indianapolis, one of the few advocates in this country of total extirpation, instead of leaving a stump, demonstrated a number of instruments and appliances, which he has devised and uses for the purpose of elevating the posterior and lateral vaginal attachments of the cervix, in order to facilitate the incision from above.

In the ensuing discussion, I stated that while admiring the ingenuity of the doctor's instruments, I did not consider them necessary, and in fact had never felt the need of them, if the patient was placed in Trendelenburg's posture, since gravitation would accomplish, in a much more perfect way, what was sought after by the use of these instruments.

As to the length of the incision, it is hard to establish a rule. However, it must be borne in mind, that an inch more than necessary is not adding very much to the surgical risk to which that patient is subjected, while, on the other hand, an inch too little may seriously interfere with the surgeon's task and unduly prolong the operation, thus involving by far greater dangers to the patient's life than an ample incision right from the start.

I have never seen the advantage of diminishing the size of the tumor before its removal by morcellement or any other of the methods, as recommended for that purpose by Péan and others. Have also never resorted to the provisory use of the elastic ligature for temporarily preventing hæmorrhage. Trendelenburg's posture always enabled me to easily tie the uterine attachments; the blood-vessels supplying the uterus were secured before, instead of after, cutting.

The most useful instrument for applying the ligatures is a stout Déschamp aneurism-needle; and as to the material used, I prefer carefully sterilized braided silk to anything else.

In cases where the fibroids have grown in the uterine walls, without unfolding the two layers of the broad ligament, thus leaving the organ perfectly moveable, the operation is a very easy procedure. Three ligatures on either side will prove sufficient to secure the uterine attachments. The two upper ones will include tubes and ovaries; the two in the centre, the rest of the broad ligaments; the lower pair will comprise the domain of the uterine arteries. The ligatures must be applied as far away from the uterus as possible.

Before the included tissues are severed, a hæmostatic forceps is temporarily applied to the uterine end, in order to prevent venous reflux from the uterus and tumor.

The ligatures having all been applied, the tumor is tilted over toward the symphysis, and an incision into the vagina is made posteriorly.

In some instances an assistant's finger in the vagina, or the use of Eastman's staff, may be of advantage in determining the proper place where to make the incision. In most cases, however, the tilting over of the uterus will cause the cervix to protrude in Douglas' pouch, and in that way clearly indicate where the incision has to be made. As soon as the vagina is opened, it is easy to slip the index finger into it and use it as a guide, while the bladder is separated from the uterus anteriorly. If the uterine arteries have been well included in the lower pair of ligatures, no hæmorrhage can result when the anterior and posterior incisions are connected, and thereby the extirpation is completed. Sometimes, however, it is necessary to apply one or two ligatures, in order to arrest slight hæmorrhage from small branches of the vesical and hæmorrhoidal arteries, which are often severed in front or behind.

As the ureters can be seen in Trendelenburg's posture, injury to them can easily be guarded against. Also, if the ligatures are applied properly, the operation can be accomplished with scarcely a drop of blood lost. The three ligatures on either side, which have been left long, are now twisted into a cable and carried out through the vaginal opening by means of a dressing-forceps. A gentle pull from below will then invert the stumps sufficiently into the vagina to keep their raw surfaces effectively away from the intestines. The bottom of the pelvis is now packed with from two to four strips of iodoform gauze in such a way as to have the distal end of the gauze protrude into the vagina, from where it will afterward have to be removed. In this way, the dressing as employed in vaginal hysterectomy is imitated as closely as possible.

Having described the technique in simple cases, it remains to advance the steps which become necessary if complications are present.

It goes without saying, that inflammatory adhesions with omentum, intestines, or parietes, have to be disposed of in the routine way. The main difficulty, however, arises when the tumor or some nodules of it have unfolded the broad ligaments and in growing have pushed up the serous covering. Then the serosa must be incised and the intra-ligamentous part of the tumor shelled out—a

procedure which is sometimes very simple but in other instances constitutes a most delicate operation, requiring the highest skill on the part of the operator.

Naturally a more or less large raw surface is thus created within the pelvic cavity; and it is a most important question for the patient's safety, that it should be cared for in the proper manner. The best principle is, to shut those raw surfaces off from the general peritoneal cavity, thus preventing adhesions and possible intestinal occlusion. Perfect drainage is also a prime factor in the smooth recovery of those cases; and, as already mentioned, I do not know of any safer or more natural method than using the vaginal outlet for that purpose, provided that the proper precautions have been taken.

Entirely dispensing with the useless and harmful flooding of the abdominal cavity with hot water, also with the drainage tube, the abdominal incision is closed up and the patient put back to bed. As soon as she has recovered from the anæsthetic, the upper portion of her body is raised up gradually until she is in a half-sitting position. This is done in order to facilitate the drainage—the vagina thus forming the lowest point of the body. On the following day salines are freely given, and if this is not followed by prompt evacuation of the bowels, a high enema is administered and the bowels caused to move daily.

The iodoform gauze dressing is allowed to remain until the eighth day after the operation, when, on removal, the peritoneal cavity is found closed by healthy granulations. Careful irrigation of the wound with a warm Thiersch's solution is then practiced, and the vagina again packed with gauze. On the tenth day, as a rule, the abdominal sutures are removed. Two weeks after the operation the vaginal dressing is changed for the second time; when, on a slight pull, the ligatures, or at least most of them, will come away with the stumps. Usually no further dressing is then required, a douche of some mild germicide given twice a day being sufficient to keep the small granulating surface clean. All my patients were allowed to get up during the third week, and left the hospital soon afterward.

Case No. I.—Mrs. C., a native or England, æt. 39, nullipara. Menstrual history normal until some months ago, when it became extremely painful, prolonged in duration, and quite strong. As long as seven or eight years ago, she had noticed a hard lump on the left side of the abdomen, which, however, did not cause her any trouble, and remained stationary. About six months ago, without any apparent cause, this swelling commenced to rapidly increase in

size, and soon prevented her from earning a living or doing even slight work. She therefore was forced to seek relief. After her admittance to the German Hospital, a fibroid tumor of the uterus filling the pelvis and extending upward above the umbilicus was made out. In view of the rapid growth of the tumor, the serious nature of the symptoms it produced, and furthermore, of the fact that the patient's general health had already commenced to be impaired, surgical interference, without delay, was advocated and met with the patient's cheerful consent. The operation lasted fifty minutes and did not offer any particular difficulties. Recovery was afebrile and uneventful but for a slight cystitis which occurred. Patient left the German Hospital three weeks after the operation, in good condition.

Case No. II.—Miss P., æt. 39, normal menstrual history until about three years ago; since then profuse menorrhagia, usually lasting ten days and greatly weakening the patient. Has noticed a swelling in her abdomen, steadily increasing in size for the last two years. Dr. Robert A. Murray diagnosed fibro-myoma, and treated her with the galvanic current for some time. Finding, however, that the patient was not benefited at all that way but constantly grew weaker, he kindly referred her to me for the radical operation. I found a pale, exsanguinated patient, with a rather weak action of the heart. The tumor reached to the umbilicus, and was almost round in shape. The tumor not having unfolded any part of the broad ligaments, the operation was very easy and was completed in less than half an hour, the patient not losing more than a teaspoonful of blood. Unfortunately, this patient died on the ninth day after the operation. But the fatal result can in no way reflect on the method of operation, and was due to an accident which could have easily been prevented, and for which I am responsible and not the method. In order to save the patient every possible drop of blood, I had ligated several small vessels while cutting through the abdominal walls; the catgut employed for these ligatures had not been properly prepared by the person intrusted with it, as was found out unfortunately too late, and caused a deeply-seated mural abscess. This was opened and freely drained as soon as detected. Still the weakened heart-muscle could not withstand the increased demands made upon it by the elevation of temperature caused by the infectious process in the abdominal parietes. The patient died, in spite of the most vigorous efforts to stimulate her heart. Her bowels had moved on the day following the operation and each succeeding day; at no time had there been tympani-

tes nor vomiting, therefore all intra-peritoneal trouble had been excluded. The autopsy proved this to be true; the stumps were in a perfectly healthy condition, the vaginal opening was closed by normal granulations, the entire peritoneal cavity was in an absolutely healthy condition. Examination of the heart revealed a marked fatty degeneration; the abscess cavity in the abdominal wall showed no pockets nor any retention of septic secretion, still it was lined with a dirty grayish coating.

Case III.—Mrs. M., æt. 43, native of Germany, had four children, the last one eight years ago. Has been in fairly good health until four years ago, when she commenced to experience severe pains before and during her menstrual epoch. Lately the pains have become excruciating, and continue during the intervening time, so as to prevent her from doing any kind of work. Painful micturition and defæcation made life a burden to her. After her admittance to the German Hospital, a fibrous tumor, springing directly from the cervix and filling the true pelvis and the lower part of the abdominal cavity, was made out. This tumor was absolutely immovable. The patient having been made acquainted with her condition and the chances she was going to take insisted upon having a radical operation performed. Before the operation, I remarked to the gentlemen present that I considered this a most severe test for the method and that if I succeeded in carrying out the technique in this case, I would feel sure that it could be done in every other instance. The first part of the operation, viz., tying off the upper portion of the uterine attachments, was quite easy. The second part, viz., the shelling out of the lower section of the tumor from the broad ligaments which it had unfolded on both sides, was extremely difficult. Still, thanks to Trendelenburg's posture, I succeeded in ligating both uterine arteries, and reached the vaginal junction without any serious hæmorrhage. After opening the vagina posteriorly, the operation was finished in the usual way. It lasted one hour and twenty minutes. Patient made uninterrupted recovery, and left the hospital four weeks afterward relieved of all her former symptoms.

Case IV.—Miss N. H., a native of Germany, æt. 40, was sent to me by Dr. L. Weber, with the diagnosis of a fibroid tumor of the uterus. She gave a normal menstrual history until three months ago. Since that time she had been flowing incessantly, while she noticed a steady increase of the size of her abdomen. The constant pain and frequent micturition also contributed a great deal toward her discomfort, and as various means to stop the alarming hæmorrhage had been vainly tried before, surgical interference was clearly

indicated, to which the patient readily gave her consent. The operation was done without encountering any great difficulties.[1] Recovery was perfectly smooth. The patient is now in perfect health and free from all former complaints.

Case V.—Mrs. F., a native of England, æt. 50, had one child thirty years ago. Cessation of menses at 45; during the last few years irregular uterine hæmorrhages, which, however, were ascribed to the climacteric changes, until patient noticed a decided swelling in the hypogastric region. Frequent and painful micturition, rapid failing in general health, loss of weight. She applied for relief to the German Dispensary. As surgical interference was deemed necessary, she was sent to the German Hospital, where the operation was performed by me. The operation was easy, lasted forty minutes, and was followed by an uninterrupted recovery. Patient relieved of all former symptoms.

Case VI.—Miss v. d. O., a native of Germany, æt. 36, came under my care after having been under treatment by several colleagues. She was suffering from Pott's kyphosis to a marked degree, was very pale and anæmic. Meno- and metrorrhagia had greatly reduced her during the last few years. Three years ago she first noticed an abdominal swelling, which has steadily grown until it reached the ensiform process. Patient had been told by some well-known gentlemen of this city that the fibrous tumor could *not* be successfully removed, and that she therefore should put up with her discomfiture.

The patient's poor general condition gave rise to great doubt whether she could stand the operation. Still she certainly could not go on that way much longer. So I decided to operate. I had no reason to regret it, as her recovery was perfectly normal without an untoward symptom.

To give a brief summary of this report, we find: Six cases operated during the last eighteen months. The comparatively small number of cases is due to the fact, that the large majority of fibroids coming under my care did not require radical treatment. The indications in six cases were rapid growth, pressure symptoms, and hæmorrhage. Of the six cases, one died in consequence of an avoidable accident, for which the method cannot be blamed. The other five, although some of these were of a very difficult type, made perfect recoveries, the temperature remaining practically nor-

[1] Although one nodule of the tumor was intraligamentous and had to be shelled out,

mal during the entire convalescence. They have been relieved of all their former symptoms.

In the present era of large tabulated statistics my report appears small and will not perhaps command much weight in judging the comparative value of the methods. But this report has at least one point in its favor, it is absolutely true.

It now remains to point out why the method of total extirpation is preferable to any one which involves the leaving of a stump, no matter whether it be treated extra- or intra-peritoneally, or whether it be disposed of in the way described and practiced by Dr. Goff, of this city, or Dr. Byford, of Chicago. It naturally is well-nigh impossible to treat this question exhaustively, and I shall try to be concise and only mention the most important features.

The short-comings of the intra-peritoneal treatment, which is conceded even by the adherents of the extra-peritoneal one to be the more ideal, although the less safe method, are briefly told: the nature of the uterine tissues forming the stump is quite different from those met with in ovariotomy. Owing to their liability to shrink soon after the operation, no matter how tight the ligatures have been applied, they may become relaxed and give rise to secondary hæmorrhage, which invariably will prove fatal.

The extra-peritoneal treatment offers greater assurance against hæmorrhage, but a fleshy stump, destined to slough away in close proximity to the peritoneal cavity, is fraught with great danger of peritonitis and septicæmia. Although this can in a measure be prevented by careful disinfection and cleanliness, still the tables compiled by Wehmer in the *Zeitschrift f. Gynækologie* show a mortality of 24 per cent. in 262 operations performed by nine eminent surgeons.

Another objection is the tedious convalescence of the patients, as the sloughing stump will require about three weeks before the ligature can be safely removed and the wound allowed to slowly heal up by granulation.

Persistent vagino-abdominal fistula, or ventral hernia, are also more or less frequent sequelæ of this method, requiring secondary operations and unduly delaying the patient's ultimate recovery. The fixation of the uterine cervix in such an unnatural position as in the lower angle of the abdominal incision gives also rise to excruciating pains, as well as to severe and often permanent bladder symptoms.

Recognizing these drawbacks to the existing methods, Drs. Goffe and Byford have made steps in the right direction. Still the objec-

tion of having necrotic tissue in the immediate proximity to the peritoneal cavity holds good against their respective procedures. They also lack the advantage of vaginal drainage, which is a most important factor.

Since all authors concur in the unanimous opinion that, with rare exceptions, all dangers after laparatomy for fibroids arise from the stump, the complete extirpation, that is removing the objectionable stump, must be considered the most rational and safest method, provided it can be proven that it does not engender other dangers which might be equally objectionable. Quoting from Dr. Thomas' treatise on diseases of women as revised by Dr. Mundé, I find the following:

"This complete extirpation of the uterus—body and cervix and all—at one sitting is of course *the ideal method*, but it is technically more difficult and therefore more serious to the patient."

If technical difficulty is the only objection to this method, it ought to be universally adopted at once. If one avails himself of the advantages of Trendelenburg's posture, the main difficulty in hysterectomy, viz., the severing of the lower third of the uterine attachments is easily overcome. As to the time consumed in the operation, it requires much less time to extirpate the entire uterus, cervix included, than to leave a stump and properly care for it according to the intra- extra- or any kind of method.

In concluding, I will only add that the after-treatment is infinitely more simple and less painful and disagreeable to the patient than with any other method. The average time of convalescence is also brought to the shortest possible limit.